The possible role of the bovine jugular vein in the development of endocarditis is concerning. However, despite a higher incidence of Melody valve endocarditis, probabilities of survival and event free survival were similar to the surgical group.

0181

Long term effects of cardiac resynchronization therapy in corrected tetralogy of Fallot

Mathieu le Bloa (1), François Roubertie (1), Maxime de Guillebon (2), Xavier Iriart (1), Sylvain Ploux (1), Pierre Bordachar (1), Jean-Benoit Thambo (1)
(1) CHU Bordeaux/Université Bordeaux 2, Hôpital Cardiologique Haut-Lévêque, Cardiologie, Pessac, France – (2) CH Pau, Cardiologie, Pau, France

Background: Patients with corrected tetralogy of Fallot (TF) often suffer from symptomatic right ventricular failure always associated with right bundle branch block (RBBB) on resting ECG.

Aims: Our objective was to evaluate the mid-term safety and efficacy of cardiac resynchronization (CRT) in this population.

Methods: We collected retrospectively every adverse events due to biventricular pacing of patients with corrected tetralogy of Fallot implanted with CRT system in our department. We also compared clinical datas (NYHA score), stress tests, ECG, echocardiographic results before implantation, at 6 months of follow-up and at the last evaluation.

Results: From August 2005 to Septembre 2009, 9 patients were implanted with CRT system, 6 (66,7%) with transvenous leads and 3 (33,4%) with epicardic leads, mostly composed of men (6, 66,7%) with a mean age of 34,2±14,5 years, 4 (44,5%) had an Implantable Cardioverter Defibrillator (ICD) function. During a median follow-up of 65 months [50-80], no main adverse event was reported, we had 1 atrial lead dislogement, 3 (33%) lead disfunctions causing only 1 (11%) resynchronisation failure and 1 (11%) intermittent phrenic nerve stimulation. CRT were associated with lower NHYA score (1,4±0,52 then 1,3±0,8 vs 2±0,4, p<0,05) and an improved exercise tolerance (100±21,6W then 112,9±12,9W, vs. 71,3±26,2W, p<0,05) at 6 months and at the end of follow-up. Mean RVEF was increased (54,3±8,2 vs. 38,5±7,5; p=0,035 and so was LVEF (53,8±8,3% vs. 48,8±8,8%, p=0,04).

Conclusion: CRT in corrected tetralogy of Fallot anad right ventricule failure is safe and seems to be associated with an improvement of patient's functional status. This first study on CRT in this population should be confirmed by a large prospective randomised multicentric clinical trial.

0095

Fate and evolution of patients with congenital heart disease: Moroccan experience

Laila Bouzouba, A.Drighil, R.Habbal
CHU Ibn Rochd, Cardiologie, Casablanca, Maroc

Congenital heart disease are frequent and often severe. Their surgical treatment restores the closest possible physiological function. In Under-developing countries, the therapeutic management of these heart disease is limited by the lack of resources and skills. The objective of this work was to study the fate of patients in whom the indication for surgery was raised

A retrospective descriptive study conducted at the University Hospital of Casablanca over 5 years (décember 2008 to décember 2013). We have collected 1908 patients with congenital heart disease, 738 (38.7%) had a surgical indication. 50% of patients were operated, 22.6% non-operated. In patients operated, the median age of surgery: 3 years [6days-51years], the median time between diagnosis and surgery: 4months [9days-5yrs]. It was a IVC (30%) and a IAC (20.4%). Favorable evolution in82.9%. Death occurred in15, 2% which 62.5% immediatly in postoperative period. Mortality varied with the centre (18% for patients operated in UHC and 24% privately center and 3.4% in abroad). In non-operated patients, 50%were due to lack of funds, 34.3% awaiting a surgical date and15.7% refused surgery. 34.5% of non-operated patients died. The quality of life of survival patients is affected in 68% in terms of physical health, and 76%of patients had mental health degradation. Although the indication for surgery of congenital heart disease is a medical necessity, the outcome of these patients in Moroccan context depends on several technical and affordability considerations. This results in a high mortality rate and also adult carriers of congenital heart disease with impaired quality of life.

0047

Follow-up of children or teenagers with paroxysmal supraventricular tachycardia but without preexcitation syndrome

Béatrice Brembilla-Perrot (1), Anne Moulin-Zinsch (2), Jean Paul Lethor (2), Carole Nrecaj-Jager (2), Anne Tisserant (2), Jean Louis Cloez (3), Cécile Marchal (3), François Marçon (2)
(1) CHU Nancy Brabois, Cardiologie, Vandoeuvre Les Nancy, France – (2) CHU Nancy Brabois, Cardiologie pédiatrique, Vandoeuvre Les Nancy, France – (3) Cardiologie pédiatrique, Metz, France

Paroxysmal supraventricular tachycardia's (SVT) are considered of benign if ECG in sinus rhythm (SR) is normal, but their occurrence in children/teenagers is always associated with an anxiousness of parents, child and doctors. The purpose of study was to report the clinical and electrophysiological data of children with SVT, their follow-up and management.

Methods: 147 children and teenagers aged from 5 to 19 years (mean 15±3) with a normal ECG in SR were studied for spontaneous SVT. Transesophageal electrophysiological study was systematic. Children were followed from 1 month to 13 years (mean 2±2 years).

Results: SVT was poorly-tolerated in 26 patients (18%). SVT was related to atrioventricular (AV nodal re-entrant tachycardia (RT) (AVNRT) in 107 children, either typical in 95 children or atypical AVNRT in 12 children, to an AVRT related to a concealed accessory pathway (AP) in 40 patients (27%). Radiofrequency (RF) of the slow pathway (n=50) or AP (n=32) was performed in absence of general anaesthesia in 82 patients (56%) from 1 month up to 13 years after initial evaluation (mean 2±2 years). Failure of ablation (frequently for refuse to continue) was frequent and occurred in 15 children (26%), 7 with AVNRT (14%), 9 with AP (28%) (0.08). Recurrence of SVT occurred in 4 patients (5%) and 14 (17.5%) have still sinus tachycardia-related symptoms. In 13 children treated by antiarrhythmic drug (AAD) or betablockers, SVT recurred in 4 children; 2 children presented AAD-related syncope. In 52 untreated patients one death was noted after AAD infusion used to stop SVT, but other patients remained asymptomatic or had short and well-tolerated SVT's.

Conclusions: The management of SVT in children remains difficult despite the development of RF ablation of SVT. Failure of ablation remains higher than in adults for several reasons. Child remains symptomatic in 17.5% of cases after ablation. One third of them had a spontaneous favourable evolution. However in symptomatic children with frequent SVT's despite antiarrhythmic drugs or betablockers, ablation should be indicated to avoid drugs-related adverse effects.

0410

Right ventricular systolic strain evolution during peri-operative management of congenital heart diseases

Clement Karsenty (1), Sébastien Hascoët (2), Khaled Hadeed (1), Romain Amadieu (1), Xavier Alacoque (3), Rose Fesseau (3), Yves Dulac (1), Sophie Breinig (4), Bertrand Leobon (2), Philippe Acar (1)
(1) CHU Toulouse, Hôpital des enfants, Pediatric cardiology, Toulouse, France – (2) CHU Toulouse, Hôpital des enfants, Pediatric cardiac surgery, Toulouse, France – (3) CHU Toulouse, Hôpital des enfants, Anesthésie cardiopédiatrique, Toulouse, France – (4) CHU Hôpital des enfants, Réanimation cardiopédiatrique, Toulouse, France

Background: RV systolic strain evolution during peri-operative management of congenital heart diseases (CHD) is unknown.

Methods: In this prospective study, RV peak systolic strain (PSS) was measured using 2D speckle tracking echocardiography (Qlab10.0 software, Philips) in 39 children undergoing surgery of a CHD (Median age: 17 months, min 6 day-old, max 14.3 year-old). Three measures were performed the day before surgery, few hours after the surgery and before discharge and compared

▶

to conventional echocardiographic parameters of RV and left ventricular (LV) function. The relationships between the evolution of RV-PSS, peri-operative parameters and the type of CHD were assessed.

Results: Mean RV-PSS at baseline was – 19.5±4.8. RV-PSS was moderately correlated with the heart rate (r=0.49), the LV Tmad (r=–0.48), the TAPSE (r=–0.54) and the tricuspid S' wave (r=–0.44)(all p<0.05). RV-PSS was decreased in cyanotic CHD (p<0.05), in children with congestive symptoms (p=0.01) and increased in ASD (p=0.02). RV-PSS was higher in RV volume increased condition such as ASD than in RV pressure increased condition such as Fallot tetralogy (p=0.006). RV-PSS decreased after surgery (p<0.0001). Mean difference between pre- and post-operative RV-PSS was 7.5±4.4. The difference was correlated with initial RV-PSS (r=–0.80), the weight (r=0.54), the ultrafiltration rate (r=0.43)(all p<0.05) but not with the duration of aortic clamp, the duration of extracorporeal circulation (n=31), the troponin peak level nor the lactates peak level. A higher difference was associated with a shorter duration of mechanical ventilation (p=0.04) and a shorter stay in intensive care unit (P=0.03). RV-PSS was better at discharge (median 6 days, p=0.0009) but remained lesser than at the initial exam (p<0.0001).

Conclusion: RV-PSS decrease after surgery of CHD. This decrease seems mainly related to loading condition rather than to RV contractility given its relationship with a faster post-operative evolution.

0450

Outcomes of pregnancy in women with Fontan palliation

Magalie Ladouceur (1), Maria Jimenez (2), Jelena Radojevic (3), Laurianne Legoan (4), Amel Mathiron (5), Pascal Amedro (6), François Sassolas (7), Elise Barre (8), Fabien Labombarda (9), Guy Vaksmann (10), Marielle Gouton (11)
(1) CHU Hôpital Necker Enfants Malades-APHP, Cardiologiue pédiatrique, Paris, France – (2) CHU Bordeaux, Hôpital de Cardiologie de Haut Lévêque, *Bordeaux, M*aladies cardio-vasculaires congénitales, *France – (3) CH Strasbourg, Cardiologie congénitale, Strasbourg, France – (4) CHU Nantes,* Hôpital mère-enfant-maternité, *Cardiologie congénitale adulte et pédiatrique*, *Nantes, France – (5) CHU Amiens,* Hôpital Nord, Cardiologie pédiatrique, *Amiens, France – (6) CHU Montpellier,* Hôpital Arnaud de Villeneuve, *Pédiatrie 1, Montpellier, France – (7) CHU Lyon,* Hôpital cardiovasculaire Louis Pradel, Cardiologie Pédiatrique et Congénitale Adulte, *Lyon, France – (8) CHU Rouen, Pédiatrie 1, Rouen, France – (9) CHU Caen, Cardiologie, Caen, France – (10) CHRU Lille,* Maladies Cardiovasculaires Infantiles et Congénitales, *Lille, France – (11) Centre Chirurgical Marie Lannelongue, Centre de référence M3C, Plessis-Robinson, France*

Background: Fontan palliation has improved long-term survival of (functional) single ventricles, allowing women to reach childbearing age. Outcomes of pregnancy are scarce and the management during pregnancy, as preventive anticoagulation, should be specified. We aimed to determine the outcomes of pregnancy in women with Fontan palliation.

Method: This retrospective multicentric study included women who had undergone Fontan palliation, followed in 12 French centers. All pregnancies were counted, including miscarriages and abortions. We observed maternal, obstetrical and neonatal outcomes, and we compared cardiovascular status before pregnancy and at the last follow-up.

Results: Twenty seven patients had 42 pregnancies (mean age=27±5 years old at first pregnancy). 15/42 (36%) were miscarriages and 24 were live births (62% of wanted pregnancies, 1 twin pregnancy). Cardiac complications occurred in 21% of pregnancies, there was no maternal death. They were essentially thrombo-embolic events (n=3) and supra-ventricular arrhythmias (n=2). Obstetrical complications occurred in 52% of pregnancies. They were premature rupture of membranes (n=5), preterm labour (n=3), placental abruption (n= 2). Hemorrhagic complications occurred in 3 women, 2 had curative anticoagulation. There were 78% of fetal/neonatal complications including one intrauterine death and one neonatal death. The main neonatal complication was the prematurity (n=17/24, 71%), and we observed 2 cases of congenital heart disease recurrence in fetuses (5%). Three severe complications occurred during postpartum period: 2 failing Fontan and 1 increase of NYHA functional class.Follow-up at mid-terms (median=5.6 months) showed no significant worsening of clinical status and cardiac function in patients.

Conclusion: Women can successfully complete pregnancy after a Fontan palliation, only if pre-partum cardiac condition has been completely evaluated and is satisfactory. Anticoagulation should be recommended to prevent severe thrombo-embolic complications during pregnancy.

0483

Cardiac magnetic resonance imaging and left ventricular diastolic function in children with hypertrophic cardiomyopathy

Marie-Philippine Clair (1), Francesca Raimondi (1), Giovanni Donato Acquaro (2), Giancarlo Todiere (2), Damien Bonnet (1), Diala Khraiche (1)
(1) CHU Hôpital Necker Enfants Malades-APHP, M3C, Cardiologie congénitale et pédiatrique, Paris, France – (2) Fondazione G. Monasterio CNR Regione Toscana, Pisa, Italie

Background: Hypertrophic cardiomyopathy (HCM) has a variety of causes in children. In adult, Cardiac Magnetic Resonance imaging (CMR) is emerging as a unique tool particularly suited to define myocardial anatomy and fibrosis. The purpose of the study is to define the feasibility and the role of CMR in children with HCM as well as the influence of myocardial fibrosis on left ventricular (LV) diastolic function in children.

Methods: CMR protocol included T2 weighted sequence in short axis view, TRIPLE IR FSE sequence, cine SSFP in short axis, two-chamber, three and four chamber view without contrast and perfusion analysis and late enhancement after injection of contrast agent. If left ventricular wall thickness seemed asymmetric, the size and location of relatively thickened segments were noted. Echocardiography analyzed LV diastolic function.

Results: A total of 60 patients were included in the study. Age at diagnosis was 3 years (range 1 day to 16 years). Mean age at CMR was 11 years (range 1-18 years). CMR was successfully performed in all patients, revealing a better performance in comparison to echocardiography to define precisely the anatomy of LV hypertrophy. Mean LV mass was estimated at 94±41gr/m^2. LV hypertrophy was concentric in 32 patients, asymmetric in 28 patients, with evidence of LV non-compaction aspect in 7 patients. The right ventricle was affected in 7 cases. Presence of LV fibrosis was detected in 6 patients in LV septum. Perfusion defects were present in 5 patients in papillary muscles. LV function was reduced (LV ejection fraction < 55%) in 7 patients. While LV fibrosis was rare, LV diastolic dysfunction was found in the majority of children.

Conclusion: CMR in children with HCM is feasible and it contributes to anatomic definition and tissue analysis. LV diastolic function in pediatric HCM is common but is not related to fibrosis or perfusion defects. Prognostic value of fibrosis and perfusion defects have to be evaluated.

0487

Dilatable pulmonary artery band: results of interventional dilatation and clinical outcome

Sophie Malekzadeh-Milani, Zakaria Jalal, Daniel Tamisier, Olivier Raisky, Damien Bonnet, Younes Boudjemline
CHU Hôpital Necker Enfants Malades-APHP, Cardiologie pédiatrique, Paris, France

Pulmonary artery (PA) banding is performed in various conditions: as a destination therapy for congenitally corrected transposition (CCTGA), as a palliative procedure for multiples ventricular septal defect (VSD) or as a transient stage before debanding for muscular VSD.

Aims: All children who had dilatation of PA band were reviewed. Reason for PA band, for cardiac catheterisation, hemodynamics pre and post dilatation and outcome were recorded.

Results: Between 2002 and 2014, 28 patients were identified. Diagnosis was VSD and aortic coarctation (N=17), multiple VSD or muscular VSD (N=9) and CCTGA (N=2). 17 patients had aortic arch repair and PA band and 11 had PA band only. PA band were dilatable (N=27) and resorbable (N=1). Median age at surgery was 16 days (2-279). Reason for dilatation of the PA band was supra systemic RV pressure in 4 patients, aortic recoarctation in 1, cyanosis in 7, RV failure in 1, supra systemic LV pressure in 2 CCTGA patients and spontaneous reduction of VSD in other patients. At catheterisation, median age was 20 months (4,7-92), median weight and mean saturation were 11kg (6,3-42) and 96% (86-100). There